Docket No. MP0088

FAX NO. 1 541 335 0354

WHAT IS CLAIMED IS:

1 (Original). A compound having the formula:

$$(HO_3S)_s \times C - C - N R^3$$

$$(SO_3H)_t$$

wherein

R¹ and R¹ are members independently selected from H, substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl moieties;

X and X1 are independently selected from O, NH or S;

- s and t are independently selected from the integers from 0 to 3, with the proviso that at least one of s and t is at least 1;
- R² is a member selected from H, substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heteroalkyl and substituted or unsubstituted heterocycloalkyl;
- R³ is a member selected from substituted or unsubstituted alkyl, substituted or unsubstituted heteroalkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted or unsubstituted or unsubstituted or unsubstituted aryl and substituted or unsubstituted heteroaryl,
- wherein at least one of R² and R³ is substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate, and
- R² and R³, together with the nitrogen to which they are bound are optionally joined to form a ring which is substituted with a member selected from

Docket No. MP0088

a reactive group, a mojety comprising a reactive group and a component of a conjugate,

with the proviso that, when R² is H, R³ is a cyclic structure substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate.

2 (Original). The compound according to claim 1, wherein X and X^1 are O; R^1 and R^1 are H; and R^2 and R^3 are members independently selected from substituted or unsubstituted alkyl, with the proviso that at least one of R^2 and R^3 are substituted with a member selected from a reactive group, a moiety substituted with a reactive group and a bond to a component of a conjugate.

3 (Original). The compound according to claim 1, wherein X and X¹ are O; R¹ and R¹ are H; and R² and R³, together with the nitrogen to which they are bonded are joined to form a ring substituted with a member selected from a reactive group, a moiety substituted with a reactive group and a bond to a component of a conjugate.

4 (Original). The compound according to claim 1, wherein X and X¹ are O; R¹ and R¹ are H; R² is H and R³ is a cyclic structure substituted with a member selected from a reactive group, a molety substituted with a reactive group and a bond to a component of a conjugate.

5 (Original). The compound according to claim 1, wherein s is 1; and t is 2.

6 (Original). The compound according to claim 1, having the formula:

$$(HO_3S)_3 \qquad X - C - C - N \qquad R^5$$

$$R^1 \qquad X^1 \qquad R^5$$

$$R^5 \qquad R^6$$

$$(SO_3H)_t$$

wherein

Docket No. MP0088

 R^4 , R^5 , R^6 and R^7 are members independently selected from hydrogen, halogen, substituted or unsubstituted C_1 - C_{18} alkyl, substituted or unsubstituted C_1 - C_{18} alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, sulfo, nitro, carboxyl, substituted or unsubstituted C_1 - C_{18} carbamoyl, amino, a reactive group and hydroxyl; and

n is 1 or 2.

7 (Original). The compound according to claim 6, wherein at least one of R⁴, R⁵, R⁶ and R⁷ is a carboxyl moiety or an active ester thereof.

8 (Original). The compound according to claim 1, having the formula:

$$(HO_{3}S)_{b}$$

$$X - C - N$$

$$R^{1}$$

$$R^{1}$$

$$R^{7}$$

$$R^{7}$$

$$R^{2}$$

wherein

R⁴, R⁵, R⁶ and R⁷ are members independently selected from hydrogen, halogen, substituted or unsubstituted C₁-C₁₈ alkyl, substituted or unsubstituted C₁-C₁₈ alkoxy, substituted or unsubstituted C₁-C₁₈ alkylthio, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, nitro, cyano, a reactive group and a bond to a component of a conjugate.

9 (Original). The compound according to claim 1, wherein said reactive group is a member selected from an acrylamide, an activated ester of a carboxylic acid, an acyl azide, an acyl nitrile, an aldehyde, an alkyl halide, an anhydride, an aniline, an aryl halide, an azide, an aziridine, a boronate, a carboxylic acid, a diazoalkane, a haloacetamide, a halotriazine, a hydrazine a hydrazide, an

Docket No. MP0088

imido ester, an isocyanate, an isothiocyanate, a malelmide, a phosphoramidite, a reactive platinum complex, a sulfonyl halide, a thiol group, and a photoactivatable group.

10 (Original). The compound according to claim 1, having the formula:

$$R^{1} O R^{2}$$
 $X - C - C - N$
 R^{3}
 $R^{1} O R^{2}$
 R^{2}
 R^{3}
 R^{3}

11 (Original). A fluorescent labeled conjugate comprising:

a component which is a member selected from an amino acid, a peptide, a protein, a polysaccharide, a nucleoside, a nucleotide, an oligonucleotide, a nucleic acid, a hapten, a psoralen, a drug, a hormone, a lipid, a lipid assembly, a synthetic polymer, a polymeric microparticle, a biological cell, a virus and combinations thereof covalently bonded to a first fluorescent moiety having the formula:

$$(HO_3S)_s \times C = C - N R^3$$

$$(SO_3H)_t$$

wherein

R¹ and R¹ are members independently selected from H, substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl moieties;

X and X¹ are independently selected from O, NH or S; s and t are independently selected from the integers from 0 to 3;

Docket No. MP0088

- R² is a member selected from H, substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl, and substituted or unsubstituted heterocycloalkyl;
- R³ is a member selected from substituted or unsubstituted alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heteroalkyl, substituted or unsubstituted or unsubstituted or unsubstituted or unsubstituted aryl and substituted or unsubstituted heteroaryl,
- wherein at least one of R² and R³ is substituted with a member selected from a reactive group, a moiety comprising a reactive group, and a component of a conjugate, and
- R² and R³, together with the nitrogen to which they are bound are optionally joined to form a ring which is substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate,
- with the proviso that, when R² is H, R³ is a cyclic structure substituted with a member selected from a reactive group, a molety comprising a reactive group, and said component of said conjugate; and
- with the proviso that at least one member selected from R² and R³ comprises at least one moiety derived from said reactive group by its reaction with a reactive moiety of said component.
 - 12 (Original). A composition comprising:
 - (a) a first conjugate according to claim 11; and
 - (b) a second conjugate, comprising a component covalently bonded to a second fluorophore having a structure different from said first fluorophore.
- 13 (Original). The composition according to claim 12, wherein said second fluorophore comprises a moiety that is a member selected from a coumarin, a xanthene, a cyanine, a pyrene, a borapolyazaindacene, an oxazine, and bimane.
- 14 (Original). The composition according to claim 13, wherein said second fluorophore comprises a fluorescein moiety.

Docket No. MP0088

- 15 (Original). The composition according to claim 12, wherein said first component and said second component have different structures.
- 16 (Original). The composition according to claim 12, wherein said first component and said second component have are identical structures.
- 17 (Original). The composition according to claim 12, wherein said first conjugate is bound to a binding partner for said first component.
- 18 (Original). The composition according to claim 12, wherein said second conjugate is bound to a binding partner for said second component.
- 19 (Original). A method for detecting an analyte in a sample, said method comprising:
 - (a) contacting said sample with a conjugate according to claim 11
 wherein said component is a binding partner for said analyte;
 - (b) incubating said conjugate with said sample for a sufficient amount of time for said analyte and said component to interact, thereby forming a fluorescent analyte; and
 - (c) illuminating said fluorescent analyte with an appropriate wavelength whereby the presence of said analyte is determined in said sample.
- 20 (Original). The method according to claim 19, wherein further comprising, between steps (b) and (c):
 - (d) separating said fluorescent analyte from said sample.
- 21 (Original). A method for the detecting a first analyte and a second analyte in a sample, said method comprising:
 - (a) incubating said sample with a composition according to claim 12, wherein said first component is a binding partner for said first analyte and said second component is a binding partner for said second analyte, for a time sufficient for said first analyte to interact with said first conjugate and said second analyte to interact with said second conjugate, thereby forming a

Docket No. MP0088

fluorescent first analyte and a fluorescent second analyte, respectively;

- (b) illuminating said first fluorescent analyte with an appropriate wavelength whereby the presence of said first analyte is detected in said sample; and
- (c) illuminating said second fluorescent analyte with an appropriate wavelength whereby the presence of said second analyte is detected in said sample.
- 22 (Original). The method according to claim 21, wherein said first fluorescent analyte and said second fluorescent analyte are illuminated with said appropriate wavelength either simultaneously or sequentially.
- 23 (Original). A kit for the detection of an analyte in a sample, wherein said kit comprises a compound according to any one of claims 1-10.
- 24 (Original). A kit according to claim 23, further comprising a reaction buffer.
- 25 (Original). A kit according to claim 24, further comprising instructions on the use of said kit.

26 (New). A compound having the formula:

or a salt thereof.

27 (New). The compound of claim 26, wherein the salt is a tris(triethylammonium) salt.

Docket No. MP0088

CONCLUSION

In view of the above amendments, it is submitted that this application is now ready for allowance. Early notice to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned agent at (541) 335-0165.

Respectfully submitted,

Date: 6/9/2006

Joel Silver Agent for Applicants Reg. No. 53,866

Molecular Probes, Inc. (A wholly owned subsidiary of Invitrogen Corp.)

29851 Willow Creek Rd. Eugene, Oregon, 97402 Phone: (541) 335-0165 Facsimile: (541) 335-0354